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ABSTRACT

An experiment tested the hypothesis that the outcome of a vocal nonverbal persuasion attempt can be affected by the participants' skills in nonverbal communication. Subjects' vocal sending or decoding abilities were pretested. Senders and decoders (N=54) were agents and recipients of social influence, respectively, in a field experiment in which social influence took the form of the senders' ability to elicit differing degrees of hypothetical willingness on the part of the recipients to serve as participants in psychological research. Senders attempted to do this by varying their vocal nonverbal cues while reading a prepared script. There was a strong effect of recipients' decoding skill on influence, such that better decoders complied with the experimental manipulation while the poorer decoders did the reverse. Sending ability by itself was not related to social influence, but the greatest degree of positive influence occurred in dyads composed of better senders and better decoders. Analysis of ratings of the senders' voices while engaging in the persuasion attempt suggested that good and poor decoders might have different affective responses to affectively toned communication. (Author)

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VOCAL NONVERBAL COMMUNICATION SKILL AND DELIBERATE SOCIAL INFLUENCE

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Vocal Nonverbal Communication Skill and Deliberate Social Influence

Most studies of nonverbal communication deal with the perception and interpretation of nonverbal behavior, that is, the meaning of nonverbal communication. Because the meanings of most nonverbal cues are a matter of context, many studies have examined contextual variables such as features of the social situation, role relationship of the participants, attributes of the participants, and the nature of concurrent verbal expression. Such studies ask, for example, how are various gestures interpreted by people from different cultures? what configurations of facial expression are labeled with which emotions? what is the perceived status of a person who stands near versus far? and so forth.

A related branch of research, also concerned with the meanings of nonverbal cues, assesses individual or group differences in accuracy of sending nonverbal cues and accuracy of decoding the meanings of nonverbal cues conveyed via such channels as facial expression, body movement, and voice tone. Studies that assess the meanings of nonverbal cues typically employ rating scales, a multiple-choice answer sheet, or some other form of verbal report.

A less traveled but possibly more important avenue of research examines the relationship of nonverbal communication to social influence. By social influence I mean the effect of one person's nonverbal communication on another's attitudes, beliefs, moods, and overt behavior, as well as the effect of a person's social influence efforts, whether intentional or not, on his or her own nonverbal behavior. Research on nonverbal social influence is important to our understanding of interpersonal outcomes such as our success at gaining the attention, confidence, friendship, cooperation, and obedience of others. Several authors have stressed the social influence function of nonverbal

communication (e.g., Danziger, 1976; Henley, 1977; Rosenthal, 1973), and, not surprisingly, the popular "body language" literature has focused mainly on social influence (Koivumaki, 1975), though the wisdom contained in such books is not always based on empirical data. Research on social influence requires dependent measures other than simple ratings or judgments of the meanings of the cues that are sent. Rather, the appropriate measures are more behavioral in nature. Perhaps because of this, there are fewer studies on nonverbal social influence than on the perception and interpretation of nonverbal cues.

One purpose of the present study was to explore some of the vocal nonverbal cues that are used spontaneously by people when they are trying to be more or less persuasive and to see which aspects of voice tone actually are associated with persuasion effects. The study also has another purpose, which is to assess the role that nonverbal communication skill plays in the success of persuasion via voice tone. This is the aspect that I will discuss in what follows.

Recently, it has been proposed that nonverbal social influence does not depend simply on enacting the "correct" influential cues (Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979; Zuckerman, DeFrank, Hall, & Rosenthal, 1978). Instead, the nonverbal communication skills of the participants may have an effect on the outcome of influence situations. Senders who lack the relevant nonverbal communication skills--for example, the skill to combine smiling, gazing, interpersonal distance, and physical contact in some optimal way for a given purpose--may be ineffectual in achieving their influence goals. However, even a sender who conveys all the "correct" cues may fail to produce the desired result if the recipient fails to notice the cues or does not share the sender's understanding of their meanings. Thus, other things being equal, successful nonverbal social influence is proposed to be a combined

function of the sender's and receiver's nonverbal communication skills.

Only one experiment testing the combined effects of senders' and receivers' nonverbal skills on social influence has been published so far. Zuckerman et al. (1978) pretested the ability of a group of experimenters to express emotions via posed and spontaneous facial expressions, and also pretested the ability of their experimental subjects to decode emotions via face, body, and voice tone. These sending and decoding skills were shown to be related to the magnitude of experimenter expectancy effects in a photo-judging task, with the greatest expectancy effects occurring in dyads consisting of better senders and better decoders, and actual negative expectancy effects tending to occur in poor sender-poor decoder dyads. Together the two nonverbal skill factors had a significant and substantial effect on the degree to which experimenters' expectations biased their subjects' performance.

Do communication skills also play a role in a situation of deliberate as opposed to unintentional social influence? The present study asks this question. A vocal nonverbal persuasion attempt was carried out in a field experiment in which the participants had been pretested on their vocal nonverbal communication skills. It was predicted that the greater the sender's skill in sending nonverbal cues and the greater the receiver's skill in decoding such cues, the more successful the nonverbal persuasion attempt would be. In sum, the study employed a communicator factor (nonverbal sending skill), a message factor (nonverbal persuasion attempt), and an audience factor (nonverbal decoding skill).

The study was a field experiment in which one group of subjects (callers) performed a telephone survey in which they asked another group of subjects (respondents) to indicate their hypothetical willingness to participate in

psychological research. An experimental manipulation of nonverbal persuasion was employed in which callers tried to elicit either more or less willingness to participate, using nonverbal vocal cues only, while reading a prepared script. Callers' nonverbal sending skills and respondents' nonverbal decoding skills were assessed in pretesting sessions conducted considerably prior to the conduct of the experiment (a year for the callers, at least half a semester for the respondents). Callers were unaware that their recruitment was related to the nonverbal tasks they had performed earlier, and respondents did not even know they were participating in an experiment. Thus, the saliency of communication abilities was extremely low for all participants.

Fifty-four subjects took part, 11 in the caller role and 43 in the respondent role. The 11 callers were selected from a pool of senders who had been pretested the previous year; they were selected on the basis of very high and very low scores on a test of ability to express emotions accurately via voice (using two methods, standard-content readings and electronic filtering of verbal content). The 43 respondents were selected from a pool of decoders who had been pretested on their ability to decode the meanings of affective cues expressed via voice tone in three channels (standard-content, filtered speech, and randomly spliced speech).

The vehicle for nonverbal persuasion was a short survey administered over the telephone by the callers to the respondents. The survey ended with the request that the respondent indicate how many hours he or she might be willing to participate in psychological research over the course of a semester, on a scale of 0 to 20 hours. This script per se did not constitute the manipulation of nonverbal persuasion. Rather, the callers were instructed that on half their calls they would be trying to elicit more willingness to participate while on half the calls they would be trying to elicit less willing-

ness. In either case they could use only their vocal nonverbal cues because they had to read the prepared script without deviation. Each caller made two high persuasion calls and two low persuasion calls, and called two good decoders and two poor decoders for a total of four calls (a 2 X 2 design). The main dependent variable was the number of hours volunteered by the respondents. Later, ratings of the audiotaped calls were made on a variety of dimensions.

Results were as follows. I did not predict main effects of nonverbal communication skill on volunteering, but rather, interactions of nonverbal skill with the persuasion conditions, since the persuasion conditions (high versus low) were the manipulation of nonverbal communication in the social influence process. I also predicted that the combination of good sender-good decoder would produce the largest social influence effects. Table 1 shows the means from the sending skill X decoding skill X persuasion condition analysis, along with the difference between the means for the high and low persuasion conditions within each combination of sender's and respondent's nonverbal communication skill. These differences indicate the direction and magnitude of nonverbal social influence within each sender skill X decoder skill cell.

The analysis of variance did not show the predicted interaction for sender's skill, but did show the predicted interaction of persuasion condition with decoder's skill ($F(1,35)=12.03$, $p<.002$, effect size= 1.17σ). Good decoders responded in the intended direction to the nonverbal persuasion attempt, while the poor decoders did the reverse. The table also shows that the prediction that the most nonverbal social influence would occur in the good sender-good decoder cell was confirmed, with that cell showing a difference between high and low persuasion conditions of 7.6 hours as compared to an average of -3.1 hours for the other three cells ($p<.05$, effect size= 1.36σ).

Table 2 shows the data collapsed over caller's skill, in order to display the interaction of condition and decoding skill. As the table shows, good decoders offered fewer hours than poor decoders in the low persuasion condition ($p < .06$), and good decoders offered more hours than poor decoders in the high persuasion condition ($p < .02$). In addition, the high and low persuasion conditions differed significantly in the predicted direction for good decoders ($p < .05$). Somewhat surprisingly, the poor decoders also responded significantly differently to the high and low persuasion conditions though, as noted earlier, in the opposite direction from the good decoders ($p < .02$). This reversal of responding among the poor decoders was unpredicted but suggested a very interesting interpretation and hypothesis for further research, which I shall return to shortly.

A number of ratings of the audiotaped calls were made, in order to determine, if possible, which aspects of the voices were responded to differentially by the good and poor decoders. The relationships of the rating dimensions to the number of hours volunteered were consistent with the earlier finding that number of hours volunteered was strongly moderated by respondents' skill (Table 3). The correlations between the ratings and number of hours volunteered were very different for the two types of decoders. Poor decoders tended to offer more hours when the voices were more stiff and less warm. Comparison of the two columns of Table 3 shows that in general on these ratings, poor decoders did the reverse of what the callers intended, to some extent. On the other hand, good decoders tended to respond in keeping with the cues that were associated with the callers' intentions--for example, high persuasion calls were calmer, and good decoders offered more hours when the voice sounded calmer. For two ratings, stiffness and calmness, poor and good decoders responded sufficiently differently from each other that the correlations were significantly or nearly significantly

different.

To summarize, the study showed that better decoders responded very much in keeping with what the callers were trying to accomplish nonverbally, but the poorer decoders did just the opposite. It is necessary to explain why the latter group did this, since one would have expected this group to be unaffected by the nonverbal persuasion attempt, not to respond significantly opposite to the callers' intentions. One possibility, that the poor decoders were simply uncooperative people who would resist any interpersonal influence, can be ruled out because the poor decoders were not any less willing to volunteer, overall, than the good decoders were. Instead, the poor decoders responded differentially to the high and low persuasion calls. How can this be explained?

Tests of ability to decode nonverbal cues have been shown to have good construct validity (e.g., Davitz, 1964; Rosenthal et al., 1979), so it will be assumed that the subjects labeled as poor decoders were, indeed, somewhat deficient in their ability to assess the emotional connotations of nonverbal cues. This does not mean, however, that such people cannot tell when affective cues are being communicated. My hypothesis as to their unpredicted performance rests on an analogy from music: such people are not tone-deaf but rather they do not know the names of the tunes they hear. That is, a poor decoder may know very well that emotions are being expressed but still be at a loss to identify them. With repeated experiences of being unable to decode cues that they know are being communicated, the poor decoders may develop a negative reaction when confronted with obviously affective cues, as a defense against their helplessness to understand.

This hypothesis leads readily to an interpretation of the results of the study. The poor decoders would have responded defensively to the more expressive, emotional qualities of the high persuasion calls. They would have felt

more at ease with voices that were more businesslike (stiff, cold, and consistent). Given that the callers were making a polite, noncoercive request, the poor decoders' preference for the more businesslike voices would manifest itself in their offering more hours in the low persuasion condition than in the high persuasion condition. The good decoders, on the other hand, would have understood the intentions of the callers in both conditions and responded accordingly, by offering more hours when the callers were trying nonverbally to obtain more hours, and fewer when the callers wanted fewer. Naturally, this interpretation of the poor decoders' reaction requires cross-validation.

To return briefly to the sending skill of the callers, the experiment showed that this skill had no effect, by itself, on nonverbal persuasion. This may be due to the fact that callers' sending skill bore little differential relation to the persuasion conditions; except for one scale, consistency, poor and good senders read their scripts in closely equivalent ways in the two conditions. The poor and good senders did differ, however, in overall voice quality, regardless of condition, with the better senders sounding more expressive and speaking faster. Since expressiveness and speed had little relationship to overall compliance, it is perhaps not surprising that sending skill did not emerge as an important variable. In some other context, however, it might. For example, speed of speech has been shown to be related to attitude change, presumably because speakers who talk faster are perceived as more credible (Miller, Maruyama, Beaber, & Valone, 1976).

To conclude, the study indicates that the search for nonverbal determinants of direct interpersonal influence cannot proceed without attention to the communication skills of the audience, since for some kinds of influence these skills apparently matter very much. Though the study found limited evidence of the role of the communicator's nonverbal sending skill, such an effect may

yet emerge. Finally, the study sheds light on the phenomenology of the poor decoder of nonverbal cues. Deficiencies in communication skills may have extensive ramifications in a person's life, not only because lack of skill precludes the accomplishment of certain tasks, but also because lack of skill produces a world of subjective experience that one might call "nonverbal autism." In this world, ironically, the other's expressiveness impedes rather than facilitates effective face-to-face communication.

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Table 1

Mean Number of Hours Volunteered, by Condition,
Caller's Sending Ability, and Respondent's Decoding Ability

Caller's Sending Ability	Respondent's Decoding Ability	
	Poor	Good
Poor		
Low Persuasion Condition	14.2	11.3
High Persuasion Condition	9.5	13.3
<u>DIFFERENCE</u>	<u>-4.7</u>	<u>2.0</u>
Good		
Low Persuasion Condition	17.2	10.8
High Persuasion Condition	10.6	18.4
<u>DIFFERENCE</u>	<u>-6.6</u>	<u>7.6</u>

Table 2

Mean Number of Hours Volunteered, by Condition and
Respondent's Decoding Ability

Persuasion Condition	Respondent's Decoding Ability		
	Poor	Good	Mean
Low Persuasion Condition	15.7	11.1	13.4
High Persuasion Condition	10.0	15.9	13.0
Mean	12.9	13.5	

Table 3

Correlations of Voice Ratings with Hours Volunteered

Rating Scale	Hours Volunteered by Poor Decoders	Hours Volunteered by Good Decoders	NOTE: Label indicates high end of rating scale
Inconsistent	-.33	-.02	
Unexpressive	.21	-.29	
Stiff	.45 ^a	-.29 ^a	
Submissive	-.37	.08	
Calm	-.25 ^b	.32 ^b	
Warm	-.41 ⁺	.06	
Slow	-.04	.26	

⁺p < .10 ^{*}p < .05 ^adiffer at p < .05 ^bdiffer at p < .10